



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
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ATLANTA, GEORGIA 30303-8960

Ms. Ashley Pilakowski  
NEPA Compliance Specialist  
Tennessee Valley Authority  
400 West Summit Hill Dr., WT 11 D  
Knoxville, Tennessee 37902-1499

JUL 31 2017

Re: Draft Environmental Impact Statement for Shawnee Fossil Plant Coal Combustion Residual Management, McCracken County, Kentucky; CEQ No: 20170102.

Dear Ms. Pilakowski:

The U. S. Environmental Protection Agency has reviewed the referenced document in accordance with Section 309 of the Clean Air Act and Section 102(2)(C) of the National Environmental Policy Act (NEPA). The purpose of this Draft Environmental Impact Statement (DEIS) is to support the Tennessee Valley Authority's (TVA's) goal to eliminate wet storage of Coal Combustion Residuals (CCR) at the Shawnee Fossil Plant (SHF), provide additional dry CCR material storage, and assist TVA in meeting new CCR regulations. The plant is located in McCracken County, Kentucky, on the south bank of the Ohio River, about 13 miles northwest of Paducah.

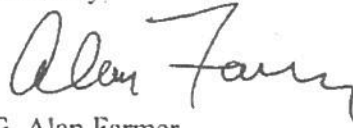
SHF has nine active coal-fired generating units constructed between 1951 and 1957. A 10th unit was retired in 2014. Currently, SHF consumes an average of 2.7 million cubic yards of coal per year which results in approximately 183,000 cubic yards of CCR annually. The coal ash is stored in both an existing Special Waste Landfill (SWL) and Ash Impoundment 2. Ash impoundment 2 would be closed under either of the action alternatives. The estimated remaining capacity for the SWL is approximately 5.2 million cubic yards. Due to current and projected SHF operations, it is expected that the existing landfill will reach capacity by 2027. To accommodate the need for additional dry CCR storage at SHF, TVA is proposing to design, build and operate a new CCR Landfill that would accommodate up to 20 additional years of storage capacity. Based on the DEIS, SHF is also expected to produce approximately 490,000 to 910,000 cubic yards of CCR per year until year 2040.

The EPA has reviewed the DEIS and the three alternatives for disposal of CCR generated at SHF. The alternatives include the no action alternative (Alternative A) and two action alternatives (Alternative B and Alternative C). Under Alternative B, TVA would close Ash Impoundment 2 in-place by reducing its footprint, close the SWL in-place and build and operate a new CCR Landfill on a portion of the original Option 1 site known as the Shawnee East Site. Under Alternative C, TVA would close Ash Impoundment 2 in-place by reducing its footprint, close the SWL in-place, and transport dry CCR produced by daily operations at SHF to the Freedom Waste Landfill, in Mayfield, Kentucky (approximately 32 miles from SHF) on public roadways. TVA has identified Alternative B as their preferred alternative. The DEIS indicates that this option achieves both the purpose and need of the project and avoids offsite transfer of CCR along public roads, thus eliminating long-term air emission impacts.

Based on our review, the EPA rated the DEIS as "EC-2"-- or Environmental Concerns with additional information requested. The EPA identified environmental concerns associated with the proposed action and enclosed detailed technical comments and recommendations for your consideration (See enclosure). The EPA's environmental concerns primarily relate to the long-term protection of water quality and fugitive dust emissions from SHF CCR operations. We recommend that the TVA adhere to federal and state permitting requirements related to water quality and necessary permits as well as best management practices that have been identified in the DEIS.

The EPA appreciates the opportunity to review the SHF Landfill DEIS. If you wish to discuss this matter further, please contact Mr. Larry O. Gissentanna of the NEPA Program Office at (404) 562-8248 or by e-mail at [gissentanna.larry@epa.gov](mailto:gissentanna.larry@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "G. Alan Farmer". The signature is fluid and cursive, with the first name "G." and last name "Farmer" clearly distinguishable.

G. Alan Farmer

Director

Resource Conservation and Restoration Division

Enclosure



**Enclosure**

**EPA Comments on the Draft Environmental Impact Statement (DEIS)  
Shawnee Fossil Plant Coal Combustion Residual Management, McCracken County, Kentucky;  
CEQ No: 20170102**

**Timing of Proposed Action-** Tennessee Valley Authority (TVA) identified the need for additional long-term storage of dry Coal Combustion Residuals (CCR) materials produced at SHF, as well as closing the existing wet storage impoundment and Special Waste Landfill (SWL). Recommendation: The Final Environmental Impact Statement (FEIS) should include a discussion or timetable on when the anticipated construction will begin on the Shawnee Fossil Plant (SHF) Bottom Ash Process Dewatering Facility because the current onsite SWL is expected to reach capacity by 2027.

**Water Resources-** In Section 2.4 of the DEIS, general statements concerning wetlands and/or stream crossings and stream alterations are provided. The DEIS does not detail what type of crossing and or stream alterations would be subject to requirements outlined in a Clean Water Act Section 404 permit or what impacts to jurisdictional waters are anticipated. TVA also provided general information in the DEIS about the General Storm Water Construction Permit for this project. In addition, Section 1.7 of the DEIS indicates that TVA will evaluate the proposed actions to determine if a modification to the Kentucky Pollutant Discharge Elimination System permit or notification to Kentucky Department of Environmental Protection will be required due to potential alteration of the wastewater stream(s). Recommendations: The EPA recommends further information in the FEIS regarding potential permitting requirements and jurisdictional stream and wetland impacts associated with the new landfill and other facilities. The EPA also recommends that the FEIS include more detail concerning how additional stormwater from the new landfill would be addressed in order to ensure future compliance with state and federal requirements and how wastewater generated from the dewatering or decanting process and seeps will be addressed.

**Air Quality-** The DEIS does not contain details regarding the potential requirement for a Title V air permit. Recommendations: The TVA should clarify and evaluate the proposed actions that may be necessary to determine if a modification to the current air permit is required in the FEIS. The TVA might also take into consideration the nearby Paducah Gaseous Diffusion Plant and the cumulative air emission impacts in the FEIS. The FEIS should include a timeframe for "temporary impacts" as it relates to fugitive dust and CCR emissions and what mitigation measures are included in best management practices to reduce the potential impacts to downwind residents and communities.

**Waste-** According to the DEIS, SHF is expected to produce approximately 490,000 to 910,000 cubic yards of CCR per year until year 2040. However, it is unclear why the future volume of CCR is expected to significantly increase from 183,000 cubic yards of CCR annually to approximately 490,000 to 910,000 cubic yards. It is also unclear when the expanded CCR volumes will take effect and when the expanded rate of CCR production will start. In addition, Section 1.7 states that depending on the results of legislation in Kentucky, TVA may need either a Registered Permit-by-Rule, or a CCR Landfill Permit from the Kentucky Division of Waste Management. Recommendation: The EPA recommends that TVA explain why the future volume of CCR is expected to significantly increase. It would also be helpful to include a timeline depicting when the expanded CCR volumes will take effect and when the expanded rate of CCR production will start. In addition, EPA recommends that TVA discuss the permit issue in greater detail in the FEIS.

**Beneficial use-** Section 3.20.1.4 of the DEIS mentions the types of beneficial uses of coal combustion solid waste. However, the analysis does not state how the TVA is currently using or will use coal ash in

“other products.” Recommendation: The EPA requests that TVA provide additional discussion on the TVA’s intent to utilize or manage coal ash as a product. The FEIS should include a discussion about how this beneficial use will/may extend the life expectancy of the newly proposed CCR Landfill.

**Noise-** From our review of the DEIS, it appears that the entire forested area for the new CCR Landfill is proposed to be clear-cut. This clear-cutting is expected to extend well beyond the actual areas needed for the new CCR Landfill and access roads. Recommendation: TVA should consider reducing the clear-cut area and the design and construction should include a mature vegetative buffer around the proposed CCR Landfill as a natural screen and noise buffer. This practice would also potentially reduce construction costs for clearing and re-planting efforts.